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**Hawaii Department of Business, Economic Development & Tourism**  
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## EXECUTIVE SUMMARY

The gross domestic product (GDP) in a region is the monetary value of all goods and services produced within the geographic area of the region in a particular period of time. It is the broadest quantitative measure of a region's total economic activity.

### Top Five Industries: Hawaii and the U.S.

In this study, the economies (national, state, and county) are divided into 20 industry groups based on roughly the two-digit North American Industry Classification System (NAICS) code. The state of Hawaii generated approximately \$92.0 billion of nominal GDP in 2018. The real estate and rental and leasing sector generated the most GDP at about \$19.2 billion or 20.9%; followed by government at about \$18.0 billion or 19.5%, accommodation and food services at about \$8.0 billion or 8.7%, health care and social assistance at about \$6.2 billion or 6.8%, and retail trade at about \$6.1 billion or 6.6%. The top five groups in Hawaii accounted for 62.5% of total nominal GDP in 2018. The same five groups in the U.S. accounted for 41.5% of total GDP in 2018. The top five groups in the U.S. in 2018 were real estate and rental and leasing, government, manufacturing, professional, scientific, and technical services, and health care and social assistance. The top five groups in the U.S. accounted for 51.9% of total nominal GDP in 2018, and the same five groups in Hawaii accounted for 53.3% of total GDP in 2018. Based on GDP for the top five industry groups, Hawaii's economy is more concentrated than the U.S. economy.

The gap in GDP share between Hawaii and the U.S. was largest in the real estate and rental and leasing group, with the share of Hawaii above that of the nation by 7.6 percentage points; followed by government by 7.3 percentage points, and accommodation and food services by 5.7 percentage points. On the other hand, the share of Hawaii in manufacturing was below that of the nation by 9.4 percentage points; followed by professional, scientific, and technical services by 3.5 percentage points.

**TABLE S1. TOP FIVE INDUSTRY GROUPS IN THE STATE OF HAWAII AND THE U.S. IN 2018**

Industry Group	% of Total Nominal GDP in 2018		
	Hawaii	U.S.	HI above U.S.
<b>Top 5 Sectors in State of Hawaii</b>	62.5%	41.5%	21.0%
Real estate and rental and leasing	20.9%	13.3%	7.6%
Government	19.5%	12.2%	7.3%
Accommodation and food services	8.7%	3.0%	5.7%
Health care and social assistance	6.8%	7.4%	-0.7%
Retail trade	6.6%	5.5%	1.1%
<b>Top 5 Sectors in the U.S.</b>	53.3%	51.9%	1.4%
Real estate and rental and leasing	20.9%	13.3%	7.6%
Government	19.5%	12.2%	7.3%
Manufacturing	2.0%	11.4%	-9.4%
Professional, scientific, and technical services	4.0%	7.6%	-3.5%
Health care and social assistance	6.8%	7.4%	-0.7%
Source: BEA and DBEDT, READ.			

## Top Five Industries: Counties in Hawaii

GDP data at the county level are only available up to 2017. The top five industry groups that generated the most GDP in 2017 by counties in Hawaii are provided in Table S2. Economies in neighbor island counties are more concentrated in tourism. Accommodation and food services industry appeared among the top five industry groups in all neighbor island counties. Maui and Kauai counties had less economic diversification, while Hawaii County was more diversified.

**TABLE S2. TOP FIVE INDUSTRY GROUPS IN 2017 BY COUNTY AND FOR THE STATE OF HAWAII**

Industry Group	% of Total Nominal GDP in 2017		
	County	State	County above State
<b>Top 5 Sectors in Honolulu</b>	61.9%	59.5%	2.4%
Government	22.1%	20.0%	2.1%
Real estate and rental and leasing	20.7%	20.6%	0.2%
Health care and social assistance	6.7%	6.6%	0.1%
Construction	6.2%	5.7%	0.4%
Retail trade	6.0%	6.5%	-0.5%
<b>Top 5 Sectors in Maui</b>	70.0%	61.6%	8.4%
Accommodation and food services	22.9%	8.7%	14.2%
Real estate and rental and leasing	20.3%	20.6%	-0.2%
Government	11.0%	20.0%	-9.0%
Retail trade	8.6%	6.5%	2.1%
Construction	7.1%	5.7%	1.3%
<b>Top 5 Sectors in Hawaii County</b>	61.7%	61.5%	0.2%
Real estate and rental and leasing	18.0%	20.6%	-2.6%
Government	16.3%	20.0%	-3.7%
Accommodation and food services	11.2%	8.7%	2.5%
Transportation and warehousing	8.4%	5.6%	2.8%
Retail trade	7.8%	6.5%	1.3%
<b>Top 5 Sectors in Kauai</b>	69.1%	61.5%	7.6%
Real estate and rental and leasing	23.5%	20.6%	2.9%
Accommodation and food services	16.6%	8.7%	7.8%
Government	12.4%	20.0%	-7.6%
Transportation and warehousing	9.7%	5.6%	4.0%
Retail trade	6.9%	6.5%	0.4%

Source: BEA and DBEDT, READ.

## Top Five Contributors to Economic Growth 2001-2018: Hawaii and the U.S.

From 2001 to 2018, total real GDP (in 2012\$) in the state of Hawaii increased approximately \$24.8 billion. The real estate and rental and leasing sector contributed the most real GDP at about 30.5%; followed by government at about 12.8%, transportation and warehousing at about 9.3%, health care and social assistance at about 8.9%, and retail trade at about 7.4%. The top five groups in Hawaii accounted for 68.9% of total additional real GDP from 2001 to 2018. The same five groups in the U.S. accounted for 38.1% of total additional real GDP from 2001 to 2018. The top five groups in the U.S. accounted for 64.5%

of total additional real GDP from 2001 to 2018, and the same five groups in Hawaii accounted for 50.2% of total additional real GDP from 2001 to 2018.

The large contribution to economic growth in Hawaii by the real estate and rental and leasing sector was partially due to the rapid growth of imputed rent, which do not create additional jobs in the economy. From 2001 to 2017, the imputed rent in Hawaii increased about \$3.2 billion or about 11.2% per year on average. In comparison, total nominal GDP in the real estate and rental and leasing sector excluding imputed rent increased only about \$7.6 billion or 4.8% per year on average during the same period. From 2001 to 2017, the homeownership rate in Hawaii was relatively stable, increased only 0.4 of a percentage point from 55.5% in 2001 to 55.9% in 2017.

The gap in real GDP contribution between Hawaii and the U.S. was largest in real estate and rental and leasing, with the share of Hawaii above that of the nation by 15.4 percentage points; followed by government by 9.1 percentage points, and transportation and warehousing by 6.3 percentage points. On the other hand, the share of Hawaii in information was below that of the nation by 10.7 percentage point; followed by manufacturing by 9.8 percentage points, and professional, scientific, and technical services by 7.0 percentage points. From 2001 to 2017, the nominal imputed rent increased 8.8% per year in the U.S. while increased 11.2% per year in Hawaii.

**TABLE S3. TOP FIVE INDUSTRY GROUPS IN THE STATE OF HAWAII AND THE U.S. THAT CONTRIBUTED MOST REAL GDP FROM 2001 TO 2018**

Industry Group	% of Total Additional Real GDP, 2001-2018		
	Hawaii	U.S.	HI above U.S.
<b>Top 5 Sectors in the State of Hawaii</b>	68.9%	38.1%	30.8%
Real estate and rental and leasing	30.5%	15.1%	15.4%
Government	12.8%	3.7%	9.1%
Transportation and warehousing	9.3%	3.0%	6.3%
Health care and social assistance	8.9%	11.1%	-2.1%
Retail trade	7.4%	5.2%	2.2%
<b>Top 5 Sectors in the U.S.</b>	50.2%	64.5%	-14.2%
Information	5.1%	15.8%	-10.7%
Real estate and rental and leasing	30.5%	15.1%	15.4%
Professional, scientific, and technical services	4.7%	11.7%	-7.0%
Health care and social assistance	8.9%	11.1%	-2.1%
Manufacturing	1.0%	10.9%	-9.8%
Source: BEA and DBEDT, READ.			

### Top Five Contributors to Economic Growth 2001-2017: Counties in Hawaii

The top five industry groups that contributed the most additional real GDP from 2001 to 2017 by county are provided in Table S4.

**TABLE S4. TOP FIVE INDUSTRY GROUPS THAT GENERATED THE MOST GDP IN 2017 BY COUNTY IN COMPARISON WITH STATE**

Industry Group	% of Total Additional Real GDP, 2001-2017		
	County	State	County above State
<b>Top 5 Sectors in Honolulu</b>	67.9%	65.0%	3.0%
Real estate and rental and leasing	36.0%	30.7%	5.3%
Government	11.4%	13.5%	-2.1%
Health care and social assistance	7.4%	8.3%	-0.8%
Transportation and warehousing	6.7%	9.0%	-2.2%
Construction	6.4%	3.6%	2.8%
<b>Top 5 Sectors in Maui</b>	79.0%	63.5%	15.5%
Accommodation and food services	25.0%	4.5%	20.5%
Real estate and rental and leasing	22.0%	30.7%	-8.6%
Retail trade	12.0%	6.5%	5.5%
Government	11.3%	13.5%	-2.2%
Health care and social assistance	8.7%	8.3%	0.4%
<b>Top 5 Sectors in Hawaii County</b>	97.6%	38.0%	59.6%
Government	30.3%	13.5%	16.8%
Transportation and warehousing	23.7%	9.0%	14.8%
Utilities	18.7%	2.8%	15.9%
Health care and social assistance	13.1%	8.3%	4.9%
Professional, scientific, and technical services	11.7%	4.5%	7.2%
<b>Top 5 Sectors in Kauai</b>	115.1%	38.0%	77.1%
Transportation and warehousing	37.8%	9.0%	28.9%
Government	29.4%	13.5%	15.9%
Utilities	19.7%	2.8%	16.9%
Health care and social assistance	14.8%	8.3%	6.5%
Professional, scientific, and technical services	13.4%	4.5%	8.9%
Source: BEA and DBEDT, READ.			

Government, healthcare and social assistance sectors were among the top five contributors to real GDP growth for all four counties. Transportation and warehousing sector was among the top five contributors in Honolulu, Hawaii, and Kauai counties. Real estate and rental and leasing sector was one

of the top five contributors of economic growth for Honolulu and Maui counties. Utilities and professional, scientific, and technical services sectors were among the top five contributors in Hawaii and Kauai counties. Accommodation and food services and retail trade sectors were among the top five contributors for Maui County, indicating that Maui's economy was more tourism concentrated than other counties.

From 2001 to 2017, Honolulu's share of total state nominal GDP increased, while the shares of all the other counties decreased. Honolulu's share of nominal GDP increased from 73.8% to 76.3%, Maui's share decreased from 10.7% to 10.5%, Hawaii County's share decreased from 10.0% to 8.9%, and Kauai's share decreased from 5.5% to 4.2%.

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## I. INTRODUCTION

The gross domestic product (GDP) in a region is the monetary value of all goods and services produced within the geographic area of the region in a particular period of time. It is the broadest quantitative measure of a region's total economic activity and is one of the most observed economic indicators by policy makers, businesses, and the public.

### Research Objectives

This study attempts to analyze the structural changes in the economies of the Nation, Hawaii State, and the individual counties in Hawaii's between 2001 and 2018 using the GDP by industry data. This period covers the most recent two business cycles. Through comparisons of the industry structures and industry contributions to economic growth, industry advantages and economic diversification can be identified.

### Data Sources and Definitions

Data used in this study mainly come from the U.S. Bureau of Economic Analysis (BEA). In the BEA's GDP by State Account, GDP by industry data are available. Both nominal and real GDP data at the 2-digit North American Industry Classification System (NAICS) code level for the state are available from 1997 to 2018.

In the BEA's GDP by Metropolitan Area Account, GDP by industry for Honolulu and Maui County data are available from 2001 to 2017 at the 2-digit NAICS level. Separate data for Hawaii County and Kauai County are not available. The GDP data in Hawaii County and Kauai County are estimated based on the two counties shares in earnings calculated from the BEA's Personal Income and Employment Account.

Based on the BEA, the values included in this study are defined as follows:

GDP by state is the measure of the market value of all final goods and services produced within a state in a particular period of time. In concept, an industry's GDP by state, referred to as its "value added", is equivalent to its gross output (sales or receipts and other operating income, commodity taxes, and inventory change) minus its intermediate inputs (consumption of goods and services purchased from other U.S. industries or imported). GDP by state is the state counterpart of the Nation's GDP, the Bureau's featured and most comprehensive measure of U.S. economic activity.

Real GDP by state is an inflation-adjusted measure of each state's gross product that is based on national prices for the goods and services produced within the state. The real estimates of gross domestic product (GDP) by state and the nation are measured in chained (2012) dollars. The real GDP by Metropolitan Area Account are measured in chained (2009) dollars. To estimate real GDP by county, the state real GDP in 2012 dollars were converted into 2009 dollars.

### Major Industry Groups of the Economy

Based on the data availability, the economy is grouped into 20 industry groups based on roughly the two-digit NAICS code. As shown in Table 1, in 2018, the state of Hawaii generated approximately \$92.0 billion of nominal GDP. Real estate and rental and leasing generated the most GDP at about \$19.2 billion or 20.9%; followed by government at about \$18.0 billion or 19.5%, accommodation and food services at about \$8.0 billion or 8.7%, health care and social assistance at about \$6.2 billion or 6.8%, and

retail trade at about \$6.1 billion or 6.6%. The top five groups accounted for 62.5% of total nominal GDP in 2018.

The large share of real estate and rental and leasing in GDP is partially due to the inclusion of imputed rent in this sector. Without imputed rent, the share of real estate and rental and leasing in GDP would be much smaller. Imputed rent does not create many jobs. In fact, in 2017 the share of real estate and rental and leasing sector in total compensation of employee was only 1.8%.

**TABLE 1. NOMINAL GDP BY INDUSTRY IN THE STATE OF HAWAII IN 2018**

Rank	Industry Group	2018 GDP (\$M)	Share of 2018 Total GDP
1	Real estate and rental and leasing	19,242	20.9%
2	Government	17,982	19.5%
3	Accommodation and food services	8,024	8.7%
4	Health care and social assistance	6,229	6.8%
5	Retail trade	6,068	6.6%
6	Construction	5,230	5.7%
7	Transportation and warehousing	5,156	5.6%
8	Professional, scientific, and technical services	3,712	4.0%
9	Administrative and waste management services	3,183	3.5%
10	Finance and insurance	2,865	3.1%
11	Wholesale trade	2,827	3.1%
12	Other services, except government	2,086	2.3%
13	Information	2,037	2.2%
14	Utilities	1,937	2.1%
15	Manufacturing	1,865	2.0%
16	Management of companies and enterprises	1,115	1.2%
17	Arts, entertainment, and recreation	1,038	1.1%
18	Educational services	952	1.0%
19	Agriculture, forestry, fishing, and hunting	406	0.4%
20	Mining	72	0.1%
	Total	92,027	100.0%

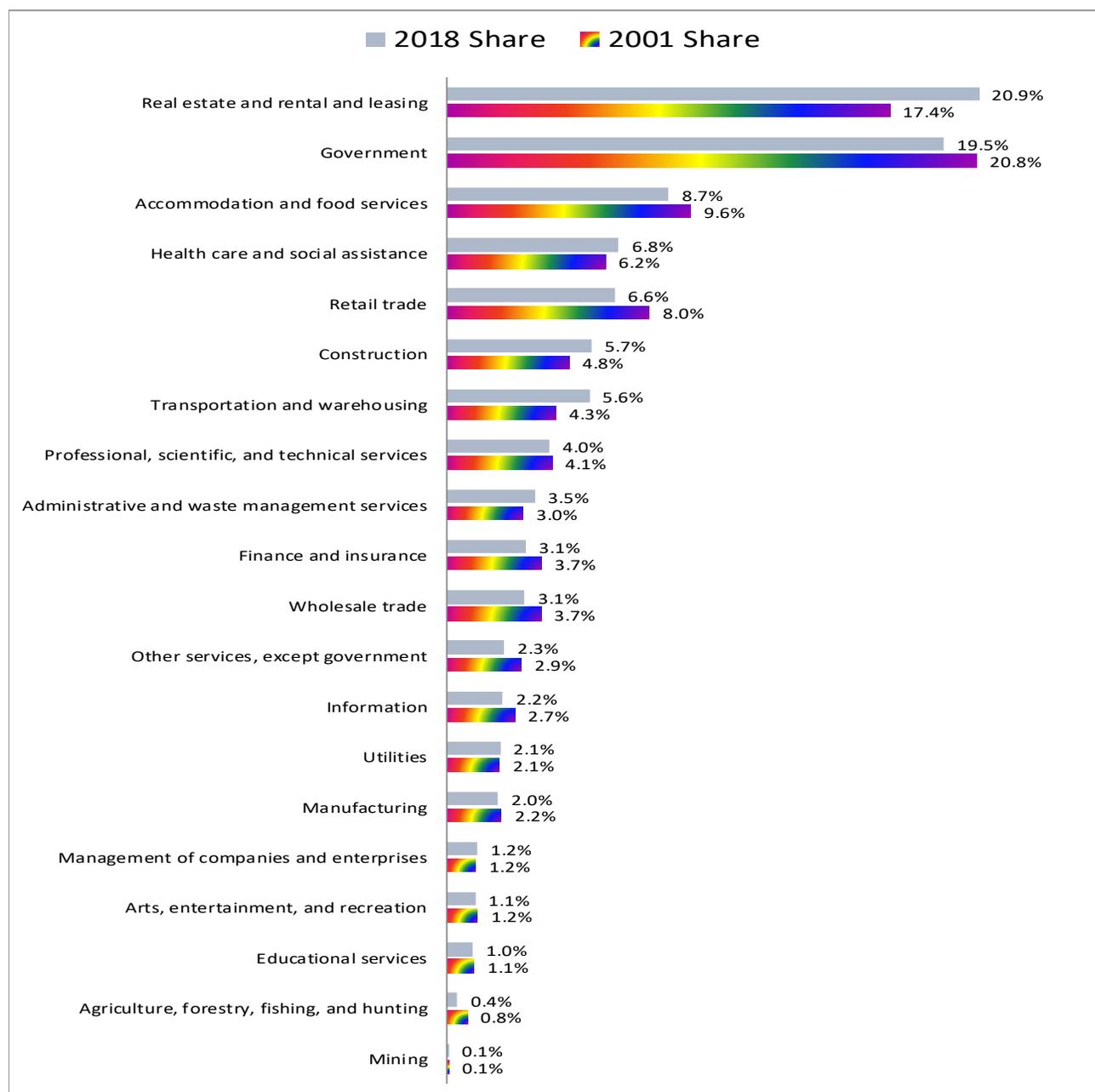
Source: BEA and DBEDT, READ.

## II. INDUSTRY STRUCTURAL CHANGE: HAWAII STATE

### Changing Industrial Structures in Hawaii

The industrial structure in terms of GDP has changed over time. As shown in Figure 1, from 2001 to 2018, 13 of the 20 sectors lost their shares in total nominal GDP, seven sectors gained their shares in nominal GDP. The real estate and rental and leasing sector gained the most, followed by transportation and warehousing, construction, health care and social assistance, and administrative and waste management services. The retail trade sector lost the most, followed by government, accommodation and food services, other services, except government, and wholesale trade.

**FIGURE 1. PERCENT OF NOMINAL GDP BY INDUSTRY**



As shown in Table 2, among the 20 sectors, the real estate and rental and leasing sector had the largest share of nominal GDP in 2018; followed by government, accommodation and food services, health care and social assistance, and retail trade.

**TABLE 2. SHARES OF TOTAL NOMINAL GDP BY INDUSTRY**

	Industry Group	Shares of Total			Changes in Shares		
		2001	2007	2018	01 to 07	07 to 18	01 to 18
1	Real estate and rental and leasing	17.4%	18.4%	20.9%	1.0%	2.5%	3.5%
2	Government	20.8%	20.5%	19.5%	-0.3%	-1.0%	-1.3%
3	Accommodation and food services	9.6%	9.2%	8.7%	-0.4%	-0.5%	-0.9%
4	Health care and social assistance	6.2%	5.7%	6.8%	-0.5%	1.0%	0.5%
5	Retail trade	8.0%	7.0%	6.6%	-0.9%	-0.5%	-1.4%
6	Construction	4.8%	7.3%	5.7%	2.4%	-1.6%	0.9%
7	Transportation and warehousing	4.3%	4.5%	5.6%	0.2%	1.1%	1.3%
8	Professional, scientific, and technical services	4.1%	4.4%	4.0%	0.2%	-0.3%	-0.1%
9	Administrative and waste management services	3.0%	3.0%	3.5%	0.0%	0.5%	0.5%
10	Finance and insurance	3.7%	3.5%	3.1%	-0.2%	-0.4%	-0.6%
11	Wholesale trade	3.7%	3.2%	3.1%	-0.5%	-0.2%	-0.6%
12	Other services, except government	2.9%	2.5%	2.3%	-0.5%	-0.2%	-0.7%
13	Information	2.7%	2.8%	2.2%	0.1%	-0.6%	-0.5%
14	Utilities	2.1%	2.0%	2.1%	-0.1%	0.1%	0.0%
15	Manufacturing	2.2%	1.8%	2.0%	-0.3%	0.2%	-0.1%
16	Management of companies and enterprises	1.2%	1.2%	1.2%	0.0%	0.0%	0.1%
17	Arts, entertainment, and recreation	1.2%	1.0%	1.1%	-0.2%	0.1%	-0.1%
18	Educational services	1.1%	1.0%	1.0%	0.0%	0.0%	-0.1%
19	Agriculture, forestry, fishing, and hunting	0.8%	0.6%	0.4%	-0.2%	-0.2%	-0.4%
20	Mining	0.1%	0.1%	0.1%	0.1%	-0.1%	0.0%
	Total	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%

Source: BEA and DBEDT, READ.

Table 3 shows the changes in the GDP shares of the four tourism intensive industries between 2007 and 2018 for the state of Hawaii. From 2007 to 2017, the total share of the four tourism intensive industries increased only slightly from 21.9% to 22.0%. The shares of retail trade and accommodation and food services decreased slightly, while the shares of other two sectors increased slightly.

**TABLE 3. SHARES OF TOURISM INTENSIVE INDUSTRIES IN NOMINAL GDP**

Industry Group	% of Total Nominal GDP		
	2007	2018	Changes
<b>Tourism Intensive Sectors in the State of Hawaii</b>			
Retail trade	7.0%	6.6%	-0.5%
Transportation and warehousing	4.5%	5.6%	1.1%
Arts, entertainment, and recreation	1.0%	1.1%	0.1%
Accommodation and food services	9.2%	8.7%	-0.5%
Tourism Intensive	21.9%	22.0%	0.2%

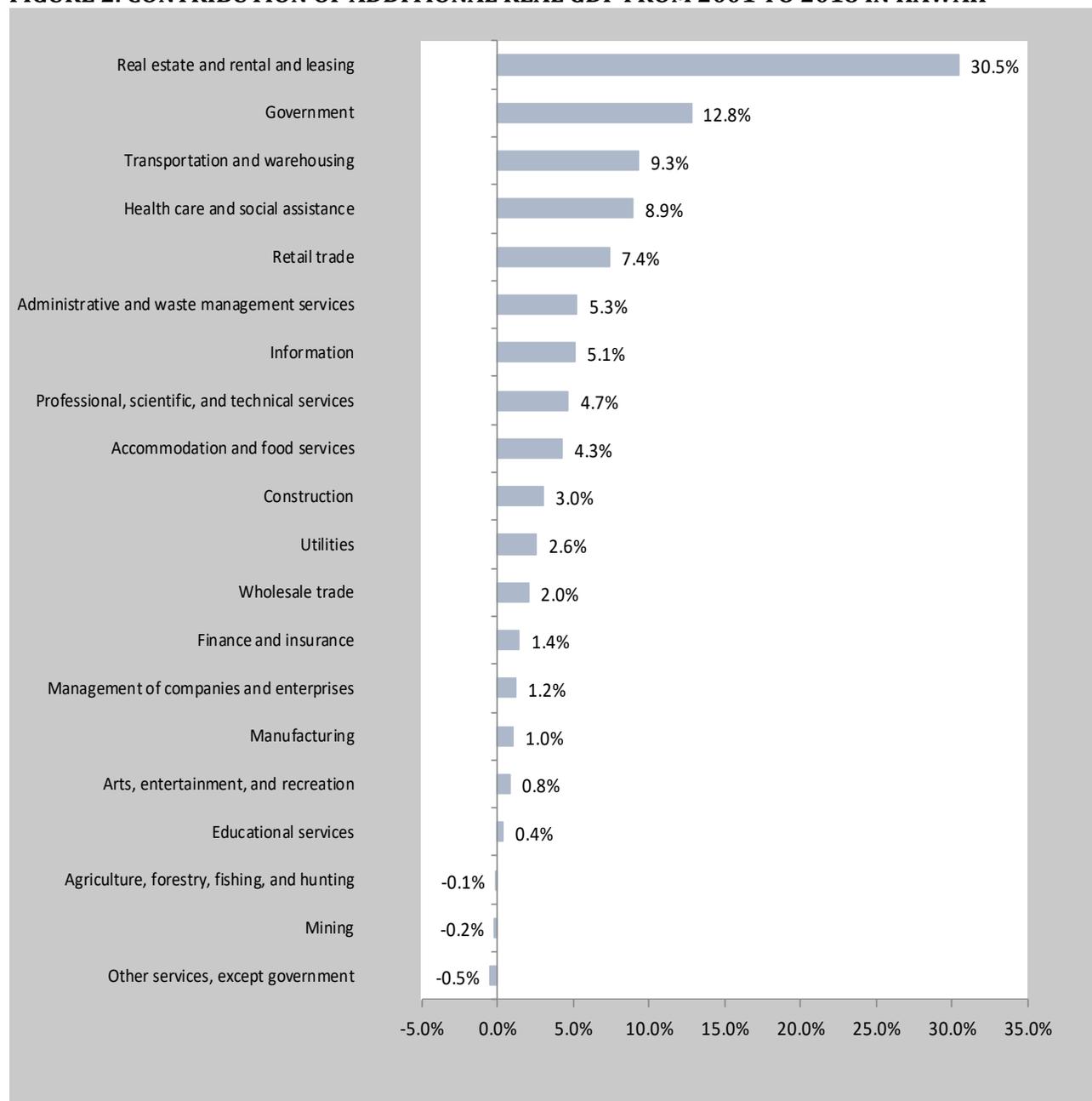
Source: BEA and DBEDT, READ.

Though the two tourism intensive industries – Accommodation and food services and retail trade lost shares in GDP between 2001 and 2018, they were still among the top five industries in terms of nominal GDP in 2018.

### Sector Contribution to Real GDP Growth

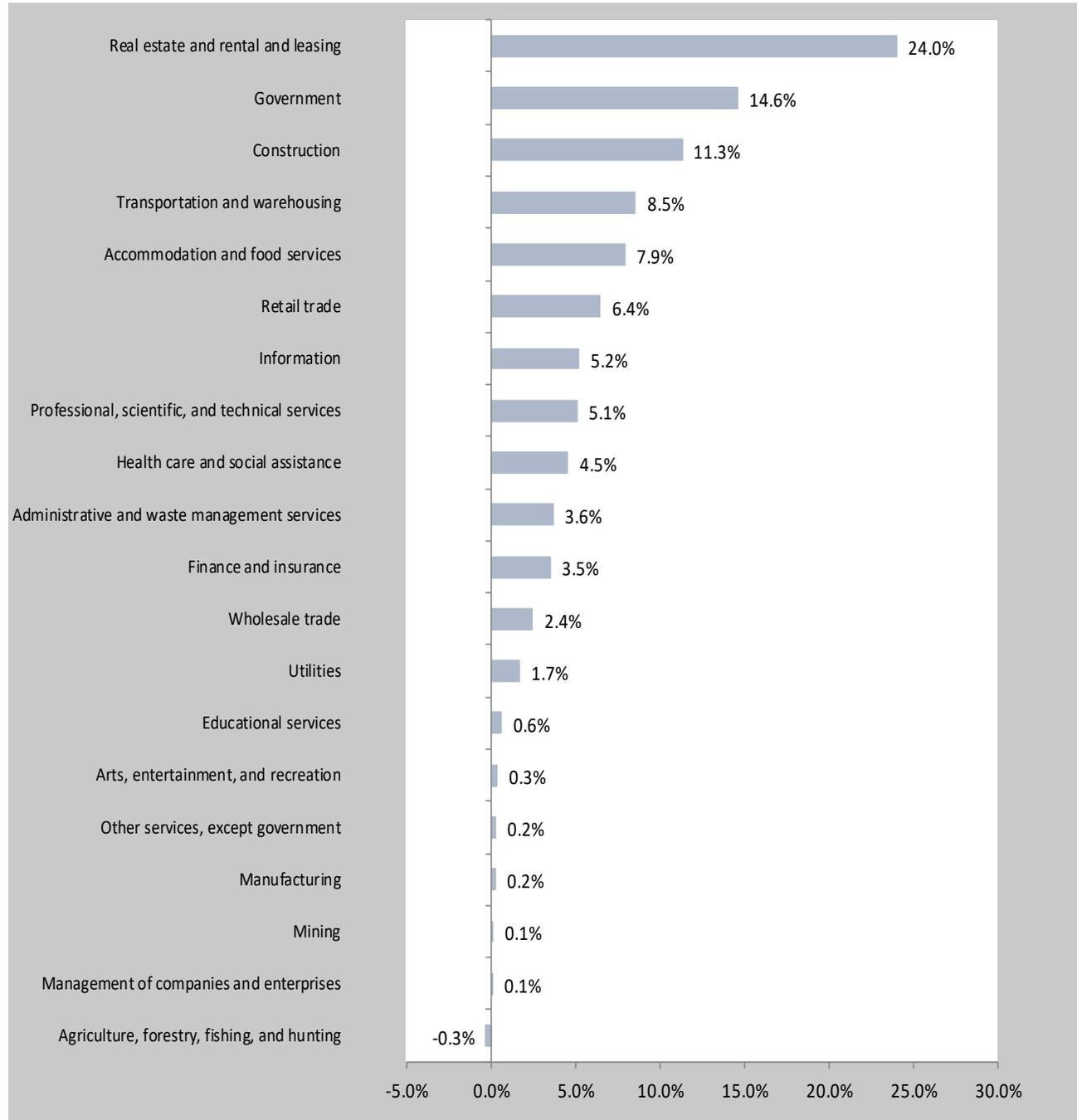
From 2001 to 2018, total real GDP in Hawaii (in 2012\$) increased \$24.8 billion or about 44.2%. As shown in Figure 2, from 2001 to 2018, the real estate and rental and leasing sector contributed the most at 30.5% of additional real GDP, followed by government at 12.8%, transportation and warehousing at 9.3%, healthcare and social assistance at 8.9%, and retail trade at 7.4%. The top five industry groups together contributed about 68.9% of total additional real GDP from 2001 to 2018.

**FIGURE 2. CONTRIBUTION OF ADDITIONAL REAL GDP FROM 2001 TO 2018 IN HAWAII**



The sector contributions of real GDP during the past two expansion period: 2001-2007 and 2009-2018 are different. From 2001 to 2007, total real GDP (in 2012\$) in Hawaii increased about \$15.2 billion or about 27.1%. As shown in Figure 3, from 2001 to 2007, the real estate and rental and leasing sector contributed the most at 24.0% of additional real GDP; followed by government at 14.6%, construction at 11.3%, transportation and warehousing at 8.5%, and accommodation and food services at 7.9%. The top five industry groups together contributed about 66.4% of total additional real GDP from 2001 to 2007.

**FIGURE 3. CONTRIBUTION OF ADDITIONAL REAL GDP FROM 2001 TO 2007 IN HAWAII**



From 2009 to 2018, total real GDP in Hawaii increased about \$11.7 billion or about 16.9%. As shown in Figure 4, from 2009 to 2018, the real estate and rental and leasing sector contributed the most at 31.9% of additional real GDP; followed by accommodation and food services at 12.4%, retail trade at 11.2%, transportation and warehousing at 11.1%, and health care and social assistance at 9.6%. The top five industry groups together contributed about 76.3% of total additional real GDP from 2009 to 2018. Tourism intensive industries contributed much more to the economic growth during the current expansion (2009-2018) at 35.5% than the previous expansion (2001-2007) at 23.1%.

**FIGURE 4. CONTRIBUTION OF ADDITIONAL REAL GDP FROM 2009 TO 2018 IN HAWAII**

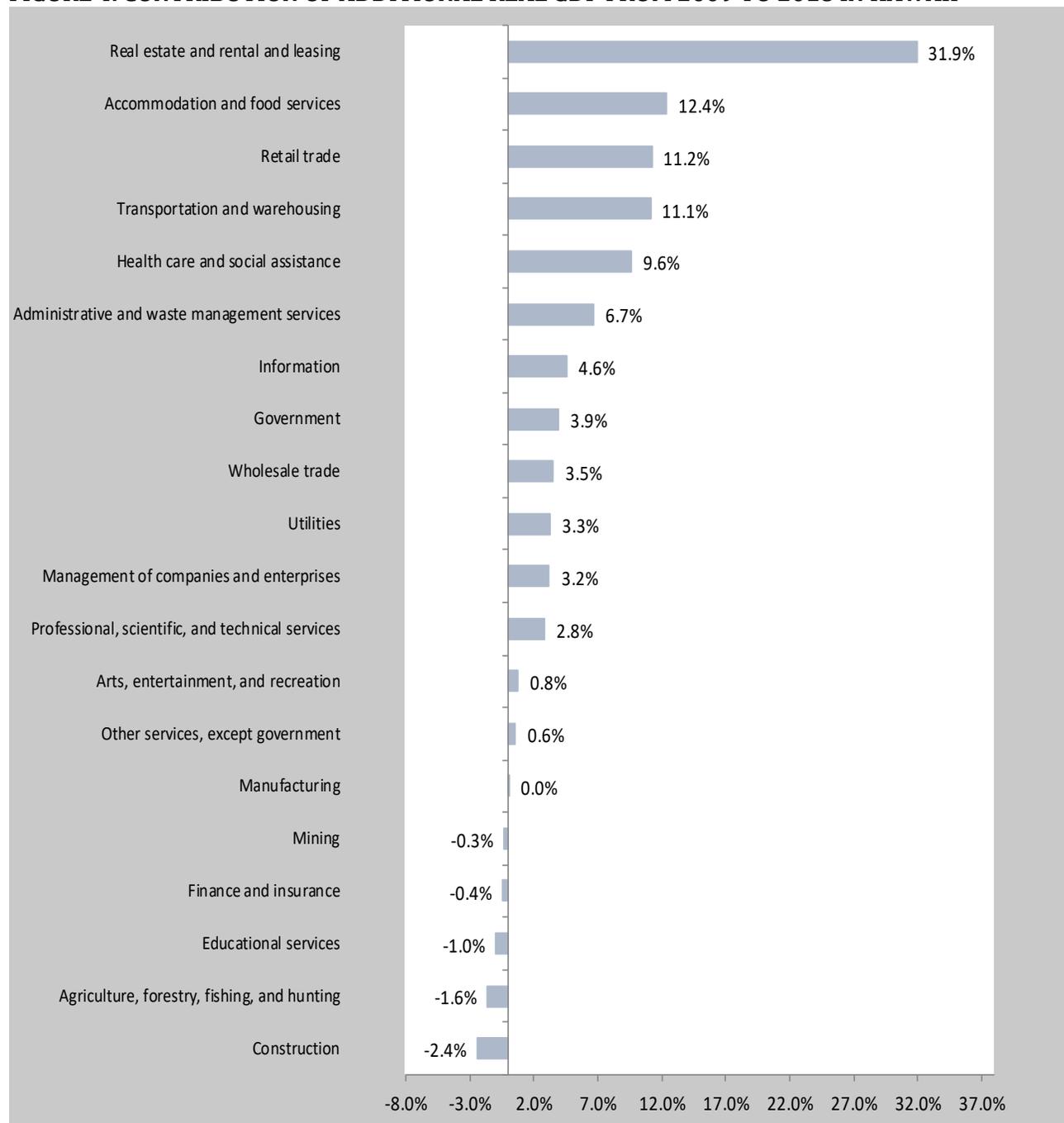


Table 4 shows the state level real GDP (in 2012\$) by sectors. From 2001 to 2007, total real GDP increased 4.1% per year on average. Among the 20 sectors, only the agriculture, forestry, fishing, and hunting sector had negative growth in real GDP. From 2009 to 2018, the annual average growth rate of total real GDP decreased to 1.8%. Five of the 20 sectors had negative growth. From 2001 to 2018, the annual average growth rate of total real GDP was 2.2%. Three of the 20 sectors had negative growth.

**TABLE 4. STATE OF HAWAII REAL GDP BY SECTORS (\$M)**

SECTOR	Industry Group	2001	2007	2009	2018	Annual Growth 01-07	Annual Growth 09-18	Annual Growth 01-18
1	Agriculture, forestry, fishing, and hunting	558	509	721	534	-1.5%	-3.3%	-0.3%
2	Mining	125	137	125	86	1.6%	-4.0%	-2.1%
3	Utilities	1,066	1,312	1,311	1,695	3.5%	2.9%	2.8%
4	Construction	3,257	4,930	4,279	3,997	7.2%	-0.8%	1.2%
5	Manufacturing	1,508	1,542	1,758	1,762	0.4%	0.0%	0.9%
6	Wholesale trade	2,137	2,499	2,224	2,638	2.6%	1.9%	1.2%
7	Retail trade	4,099	5,053	4,590	5,904	3.5%	2.8%	2.2%
8	Transportation and warehousing	2,035	3,298	3,011	4,314	8.4%	4.1%	4.5%
9	Information	1,002	1,768	1,718	2,252	9.9%	3.1%	4.9%
10	Finance and insurance	1,887	2,400	2,290	2,241	4.1%	-0.2%	1.0%
11	Real estate and rental and leasing	9,091	12,644	12,820	16,556	5.7%	2.9%	3.6%
12	Professional, scientific, and technical services	2,275	3,024	3,087	3,418	4.9%	1.1%	2.4%
13	Management of companies and enterprises	824	832	738	1,116	0.2%	4.7%	1.8%
14	Administrative and waste management services	1,497	2,037	2,008	2,787	5.3%	3.7%	3.7%
15	Educational services	721	808	924	811	1.9%	-1.4%	0.7%
16	Health care and social assistance	3,500	4,169	4,566	5,689	3.0%	2.5%	2.9%
17	Arts, entertainment, and recreation	701	750	808	897	1.1%	1.2%	1.5%
18	Accommodation and food services	5,526	6,695	5,118	6,570	3.2%	2.8%	1.0%
19	Other services, except government	1,851	1,887	1,672	1,739	0.3%	0.4%	-0.4%
20	Government	12,791	14,952	15,467	15,926	2.6%	0.3%	1.3%
	Total	56,019	71,192	69,095	80,798	4.1%	1.8%	2.2%

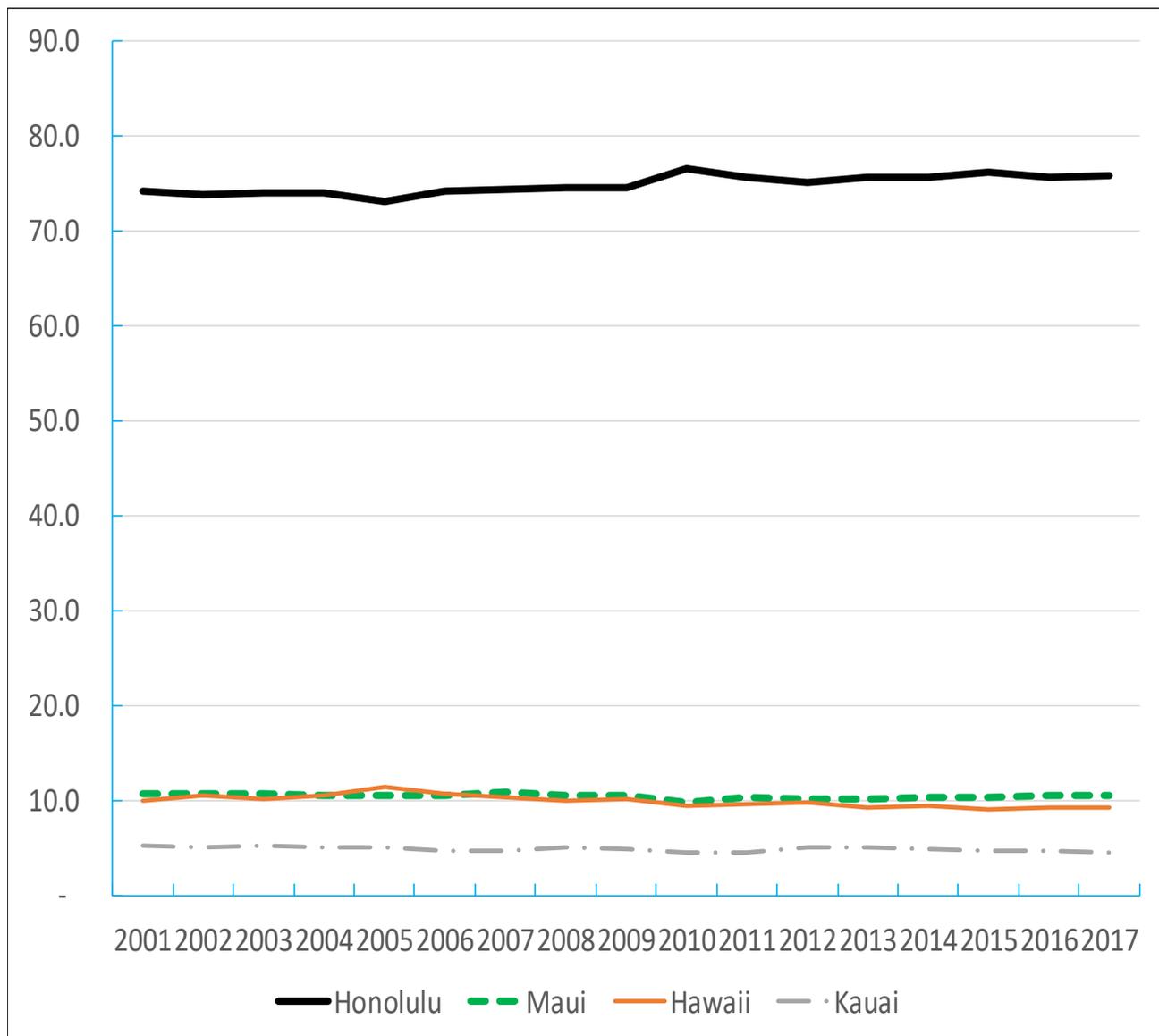
Source: BEA and DBEDT, READ.

### III. INDUSTRY STRUCTURAL CHANGE: COUNTIES IN HAWAII

#### County Shares of State GDP by Industry

From 2001 to 2017, the share of Honolulu in total state GDP increased, while the shares of all the other counties decreased. As shown in Figure 5, from 2001 to 2017, Honolulu's share of nominal GDP increased from 74.1% to 75.8%, Maui's share decreased from 10.7% to 10.5%, Hawaii County's share decreased from 10.0% to 9.2%, and Kauai's share decreased from 5.2% to 4.5%.

**FIGURE 5. COUNTY'S SHARE IN STATE NOMINAL GDP, 2001-2017**



As shown in Table 5, in 2001, Honolulu's shares in state nominal GDP ranged from 39.2% in agriculture, forestry, fishing, and hunting to 91.5% in management of companies and enterprises. Eleven of the 20 sectors in Honolulu had shares above Honolulu's share of total nominal GDP. Maui's shares in state nominal GDP ranged from 4.1% in educational services to 24.8% in agriculture, forestry, fishing, and hunting. Seven of the 20 sectors in Maui had shares above its share of total nominal GDP. Hawaii County's shares in state nominal GDP ranged from 0.1% in information to 27.5% in agriculture, forestry, fishing, and hunting. Ten of the 20 sectors in Hawaii County had shares above its share of total nominal GDP. Kauai's shares in state nominal GDP ranged from 0.1% in information to 11.9% in accommodation and food services. Eight of the 20 sectors in Kauai had shares above its share of total nominal GDP.

**TABLE 5. COUNTIES' SHARES OF NOMINAL GDP BY INDUSTRY-2001**

	Industry Group	State	% of State Total			
		\$M	Honolulu	Maui	Hawaii	Kauai
1	Agriculture, forestry, fishing, and hunting	352	39.2	24.8	27.5	8.5
2	Mining	39	70.7	8.2	14.1	7.0
3	Utilities	898	64.4	14.1	15.1	6.4
4	Construction	2,065	67.6	14.9	13.4	4.2
5	Manufacturing	928	84.4	8.0	6.2	1.4
6	Wholesale trade	1,591	82.5	6.1	9.3	2.1
7	Retail trade	3,421	72.7	12.1	10.1	5.0
8	Transportation and warehousing	1,841	82.1	7.0	7.3	3.6
9	Information	1,151	91.3	8.5	0.1	0.1
10	Finance and insurance	1,598	79.1	9.8	6.3	4.9
11	Real estate and rental and leasing	7,471	63.5	13.0	14.6	9.0
12	Professional, scientific, and technical services	1,775	90.1	5.7	3.1	1.0
13	Management of companies and enterprises	495	91.5	5.4	2.4	0.8
14	Administrative and waste management services	1,290	76.6	9.6	7.8	6.0
15	Educational services	468	79.8	4.1	12.1	3.9
16	Health care and social assistance	2,673	79.0	7.6	9.4	4.0
17	Arts, entertainment, and recreation	530	44.7	23.3	20.4	11.5
18	Accommodation and food services	4,111	48.5	23.6	16.0	11.9
19	Other services, except government	1,264	72.7	9.1	12.5	5.7
20	Government	8,934	87.5	5.0	5.4	2.1
	Total	42,895	74.1	10.7	10.0	5.2

Source: BEA and DBEDT, READ.

As shown in Table 6, in 2017, Honolulu's shares in state nominal GDP ranged from 29.4% in agriculture, forestry, fishing, and hunting to 94.9% in management of companies and enterprises. Eleven of the 20 sectors in Honolulu had shares above Honolulu's share of total nominal GDP. Maui's shares in state nominal GDP ranged from 0.2% in mining to 27.5 in accommodation and food services. Seven of the 20 sectors in Maui had shares above its share of total nominal GDP. Hawaii County's shares in state nominal GDP ranged from 0.7% in finance and insurance to 49.3 in agriculture, forestry, fishing, and hunting. Ten of the 20 sectors in Hawaii County had shares above its share of total nominal GDP. Kauai's shares in state nominal GDP ranged from 0.2% in finance and insurance to 11.7% in arts, entertainment, and recreation. Eight of the 20 sectors in Kauai had shares above its share of total nominal GDP.

**TABLE 6. COUNTIES' SHARES OF NOMINAL GDP BY INDUSTRY-2017**

	Industry Group	State	% of State Total			
		\$M	Honolulu	Maui	Hawaii	Kauai
1	Agriculture, forestry, fishing, and hunting	433	29.4	17.3	49.3	4.0
2	Mining	63	96.5	0.2	2.1	1.3
3	Utilities	1,850	53.8	10.3	25.6	10.2
4	Construction	5,115	81.7	12.9	3.7	1.7
5	Manufacturing	1,747	92.7	5.3	1.5	0.5
6	Wholesale trade	2,781	79.3	8.1	9.8	2.8
7	Retail trade	5,807	70.3	13.9	11.0	4.8
8	Transportation and warehousing	5,027	71.7	6.8	13.7	7.8
9	Information	1,879	85.8	7.3	5.4	1.5
10	Finance and insurance	2,843	94.5	4.6	0.7	0.2
11	Real estate and rental and leasing	18,304	76.4	10.4	8.0	5.2
12	Professional, scientific, and technical services	3,571	81.5	5.7	9.2	3.7
13	Management of companies and enterprises	1,088	94.9	2.8	1.5	0.8
14	Administrative and waste management services	3,057	71.2	11.4	11.2	6.2
15	Educational services	940	70.0	6.9	17.5	5.6
16	Health care and social assistance	5,913	77.0	8.4	10.2	4.3
17	Arts, entertainment, and recreation	1,031	49.2	18.4	20.7	11.7
18	Accommodation and food services	7,790	52.1	27.5	11.8	8.6
19	Other services, except government	1,999	74.4	13.6	8.4	3.6
20	Government	17,808	83.9	5.8	7.5	2.8
	Total	89,044	75.8	10.5	9.2	4.5

Source: BEA and DBEDT, READ.

As shown in Table 7, from 2001 to 2017, Honolulu's share in total nominal GDP increased 1.7 percentage point. In nine of the 20 sectors, Honolulu's shares increased. The mining sector increased the most at 25.8 percentage points; followed by finance and insurance, construction, real estate and rental and leasing, mining, and manufacturing. The utilities sector in Honolulu lost the most at 10.6 percentage points; followed by transportation and warehousing, and educational services. From 2001 to 2017, Maui's share in total nominal GDP decreased 0.2 of a percentage point. In eight of the 20 sectors, Maui's shares increased. The other services sector increased the most at 4.5 percentage points, while the mining sector lost the most at 8.1 percentage points. Hawaii County's share in total nominal GDP decreased 0.8 of a percentage point. In 12 of the 20 sectors, Hawaii County's shares increased. The agriculture, forestry, fishing, and hunting sector increased the most at 21.8 percentage points, while the mining sector lost the most at 12.1 percentage points. Kauai's share in total nominal GDP decreased 0.7 of a percentage point. In ten of the 20 sectors, Kauai's shares increased. The transportation and warehousing sector increased the most at 4.2 percentage points, while the mining sector lost the most at 5.7 percentage points.

**TABLE 7. CHANGES IN COUNTIES' SHARES OF NOMINAL GDP BY INDUSTRY: 2001-2017**

	Industry Group	Changes in Percentage Points			
		Honolulu	Maui	Hawaii	Kauai
1	Agriculture, forestry, fishing, and hunting	-9.8	-7.4	21.8	-4.6
2	Mining	25.8	-8.1	-12.1	-5.7
3	Utilities	-10.6	-3.8	10.5	3.9
4	Construction	14.1	-2.0	-9.7	-2.5
5	Manufacturing	8.3	-2.7	-4.8	-0.9
6	Wholesale trade	-3.2	2.0	0.5	0.7
7	Retail trade	-2.4	1.7	0.9	-0.2
8	Transportation and warehousing	-10.4	-0.1	6.4	4.2
9	Information	-5.5	-1.2	5.3	1.5
10	Finance and insurance	15.5	-5.2	-5.6	-4.6
11	Real estate and rental and leasing	13.0	-2.6	-6.5	-3.8
12	Professional, scientific, and technical services	-8.6	-0.1	6.1	2.7
13	Management of companies and enterprises	3.4	-2.6	-0.8	0.0
14	Administrative and waste management services	-5.4	1.8	3.4	0.2
15	Educational services	-9.8	2.8	5.4	1.7
16	Health care and social assistance	-2.0	0.9	0.8	0.3
17	Arts, entertainment, and recreation	4.4	-4.9	0.3	0.2
18	Accommodation and food services	3.7	3.8	-4.2	-3.4
19	Other services, except government	1.7	4.5	-4.1	-2.1
20	Government	-3.5	0.8	2.1	0.7
	Total	1.7	-0.2	-0.8	-0.7

Source: BEA and DBEDT, READ.

## County Industrial Structure and Sector Contribution to Real GDP Growth

The following tables summarize the 2017 county industry structures, the changes in the shares of tourism intensive sectors from 2007 to 2017 by county, and the sector contribution of real GDP growth in the 2001-2007, 2009-2017, and 2001-2017 periods by county.

### City & County of Honolulu

As shown in Table 8, in 2017, Honolulu generated approximately \$67.5 billion of nominal GDP. Government sector generated the most GDP at about \$14.9 billion or 22.1% of total GDP; followed by real estate and rental and leasing at about \$14.0 billion or 20.7%, health care and social assistance at about \$4.6 billion or 6.7%, construction at about \$4.2 billion or 6.2%, and retail trade at about 4.1 billion or 6.0%. The top five groups accounted for 61.9% of total nominal GDP in 2017.

**TABLE 8. NOMINAL GDP BY INDUSTRY IN HONOLULU IN 2017**

Rank	Industry Group	2017 GDP (\$M)	Share of 2017 Total GDP
1	Government	14,944	22.1%
2	Real estate and rental and leasing	13,992	20.7%
3	Health care and social assistance	4,554	6.7%
4	Construction	4,179	6.2%
5	Retail trade	4,083	6.0%
6	Accommodation and food services	4,061	6.0%
7	Transportation and warehousing	3,605	5.3%
8	Professional, scientific, and technical services	2,910	4.3%
9	Finance and insurance	2,687	4.0%
10	Wholesale trade	2,205	3.3%
11	Administrative and waste management services	2,177	3.2%
12	Manufacturing	1,620	2.4%
13	Information	1,612	2.4%
14	Other services, except government	1,487	2.2%
15	Management of companies and enterprises	1,033	1.5%
16	Utilities	995	1.5%
17	Educational services	658	1.0%
18	Arts, entertainment, and recreation	507	0.8%
19	Agriculture, forestry, fishing, and hunting	127	0.2%
20	Mining	61	0.1%
	Total	67,496	100.0%

Source: BEA and DBEDT, READ.

Table 9 shows the changes in the GDP shares of the four tourism intensive industries in Honolulu. From 2007 to 2017, the total share of the four tourism intensive industries remained about the same at 18.2% in Honolulu. The shares of retail trade and accommodation and food services decreased slightly, while the shares of other two sectors increased slightly.

**TABLE 9. SHARES OF TOURISM INTENSIVE INDUSTRIES IN HONOLULU**

Industry Group	% of Total Nominal GDP		
	2007	2017	Changes
<b>Tourism Intensive Sectors in Honolulu</b>			
Retail trade	6.3%	6.0%	-0.3%
Transportation and warehousing	4.9%	5.3%	0.4%
Arts, entertainment, and recreation	0.6%	0.8%	0.1%
Accommodation and food services	6.3%	6.0%	-0.3%
Tourism Intensive	18.2%	18.2%	0.0%

Source: BEA and DBEDT, READ.

From 2001 to 2017, total real GDP (in 2009\$) in Honolulu increased \$17.8 billion or about 44.8%. As shown in Table 10, from 2001 to 2017, the real estate and rental and leasing sector contributed the most at 36.0% of additional real GDP; followed by government at 11.4%, healthcare and social assistance at 7.4%, transportation and warehousing at 6.7%, and construction at 6.4%. The top five industry groups together contributed about 67.9% of total additional real GDP from 2001 to 2017.

**TABLE 10. CONTRIBUTION OF ADDITIONAL REAL GDP IN HONOLULU**

	Industry Group	% of Additional Real GDP		
		2001-2007	2009-2017	2001-2017
1	Real estate and rental and leasing	29.8%	35.8%	36.0%
2	Government	11.6%	3.5%	11.4%
3	Health care and social assistance	4.3%	7.6%	7.4%
4	Transportation and warehousing	9.7%	6.5%	6.7%
5	Construction	10.1%	5.1%	6.4%
6	Retail trade	3.6%	8.3%	5.3%
7	Administrative and waste management services	3.8%	4.8%	4.6%
8	Accommodation and food services	6.8%	11.8%	4.5%
9	Information	5.8%	2.9%	4.3%
10	Finance and insurance	5.1%	2.5%	3.8%
11	Professional, scientific, and technical services	5.1%	0.8%	3.6%
12	Wholesale trade	3.3%	2.7%	1.9%
13	Management of companies and enterprises	0.2%	4.2%	1.6%
14	Manufacturing	0.1%	1.8%	1.5%
15	Arts, entertainment, and recreation	0.2%	1.4%	0.8%
16	Utilities	0.8%	0.5%	0.8%
17	Educational services	0.4%	-1.1%	-0.1%
18	Mining	0.3%	-0.4%	-0.1%
19	Agriculture, forestry, fishing, and hunting	-0.6%	0.1%	-0.2%
20	Other services, except government	-0.4%	1.1%	-0.3%
	Total	100.0%	100.0%	100.0%

Source: BEA and DBEDT, READ.

## Maui County

As shown in Table 11, in 2017, Maui generated approximately \$9.3 billion of nominal GDP. Accommodation and food services generated the most GDP at about \$2.1 billion or 22.9% of total GDP; followed by real estate and rental and leasing at about \$1.9 billion or 20.3%, government at about \$1.0 billion or 11.0%, retail trade at about \$0.8 billion or 8.6%, and construction at about 0.7 billion or 7.1%. The top five groups accounted for 70.0% of total nominal GDP in 2017.

**TABLE 11. NOMINAL GDP BY INDUSTRY IN MAUI IN 2017**

Rank	Industry Group	2017 GDP (\$M)	Share of 2017 Total GDP
1	Accommodation and food services	2,141	22.9%
2	Real estate and rental and leasing	1,895	20.3%
3	Government	1,030	11.0%
4	Retail trade	806	8.6%
5	Construction	658	7.1%
6	Health care and social assistance	499	5.3%
7	Administrative and waste management services	348	3.7%
8	Transportation and warehousing	344	3.7%
9	Other services, except government	272	2.9%
10	Wholesale trade	225	2.4%
11	Professional, scientific, and technical services	202	2.2%
12	Utilities	191	2.0%
13	Arts, entertainment, and recreation	190	2.0%
14	Information	137	1.5%
15	Finance and insurance	130	1.4%
16	Manufacturing	93	1.0%
17	Agriculture, forestry, fishing, and hunting	75	0.8%
18	Educational services	65	0.7%
19	Management of companies and enterprises	30	0.3%
20	Mining	0	0.0%
	Total	9,330	100.0%

Source: BEA and DBEDT, READ.

Table 12 shows the changes in the GDP shares of the four tourism intensive industries in Maui. From 2007 to 2017, the total share of the four tourism intensive industries increased 6.0 percentage points from 31.3% to 37.3% in Maui. Increased shares in accommodation and food services and transportation and warehousing more than offset decreased shares in other two sectors.

**TABLE 12. SHARES OF TOURISM INTENSIVE INDUSTRIES IN MAUI**

Industry Group	% of Total Nominal GDP		
	2007	2017	Changes
<b>Tourism Intensive Sectors in Maui</b>			
Retail trade	9.5%	8.6%	-0.9%
Transportation and warehousing	2.9%	3.7%	0.8%
Arts, entertainment, and recreation	2.3%	2.0%	-0.2%
Accommodation and food services	16.6%	22.9%	6.4%
Tourism Intensive	31.3%	37.3%	6.0%

Source: BEA and DBEDT, READ.

From 2001 to 2017, total real GDP in Maui increased \$2.3 billion or about 39.8%. As shown in Table 13, from 2001 to 2017, the accommodation and food services sector contributed the most at 25.0% of additional real GDP; followed by real estate and rental and leasing 22.0%, retail trade at 12.0%, government at 11.3%, and healthcare and social assistance at 8.7%. The top five industry groups together contributed about 79.0% of total additional real GDP from 2001 to 2017.

**TABLE 13. CONTRIBUTION OF ADDITIONAL REAL GDP IN MAUI**

	Industry Group	% of Additional Real GDP		
		2001-2007	2009-2017	2001-2017
1	Accommodation and food services	0.8%	50.3%	25.0%
2	Real estate and rental and leasing	32.3%	3.1%	22.0%
3	Retail trade	13.8%	12.6%	12.0%
4	Government	8.6%	6.8%	11.3%
5	Health care and social assistance	2.7%	12.4%	8.7%
6	Administrative and waste management services	7.0%	5.9%	7.5%
7	Transportation and warehousing	4.5%	7.2%	5.1%
8	Wholesale trade	2.8%	5.2%	3.6%
9	Other services, except government	4.2%	1.2%	2.7%
10	Professional, scientific, and technical services	2.4%	1.1%	2.3%
11	Information	3.4%	-0.6%	2.3%
12	Construction	12.3%	4.5%	2.0%
13	Educational services	1.3%	0.1%	1.0%
14	Arts, entertainment, and recreation	0.9%	1.2%	0.4%
15	Utilities	2.8%	-1.0%	0.2%
16	Mining	-0.3%	-0.4%	-0.4%
17	Manufacturing	1.0%	-1.2%	-0.5%
18	Management of companies and enterprises	0.8%	-0.3%	-0.5%
19	Agriculture, forestry, fishing, and hunting	2.0%	-8.0%	-1.7%
20	Finance and insurance	-3.3%	-0.3%	-3.1%
	Total	100.0%	100.0%	100.0%

Source: BEA and DBEDT, READ.

## Hawaii County

As shown in Table 14, in 2017, Hawaii County generated approximately \$8.2 billion of nominal GDP. Real estate and rental and leasing generated the most GDP at about \$1.5 billion or 18.0% of total GDP; followed by government at about \$1.3 billion or 16.3%, accommodation and food services at about \$0.9 billion or 11.2%, transportation and warehousing at about \$0.7 billion or 8.4%, and retail trade at about \$0.6 billion or 7.8%. The top five groups accounted for 61.7% of total nominal GDP in 2017.

**TABLE 14. NOMINAL GDP BY INDUSTRY IN HAWAII COUNTY IN 2017**

Rank	Industry Group	2017 GDP (\$M)	Share of 2017 Total GDP
1	Real estate and rental and leasing	1,469	18.0%
2	Government	1,333	16.3%
3	Accommodation and food services	919	11.2%
4	Transportation and warehousing	688	8.4%
5	Retail trade	638	7.8%
6	Health care and social assistance	604	7.4%
7	Utilities	474	5.8%
8	Administrative and waste management services	343	4.2%
9	Professional, scientific, and technical services	327	4.0%
10	Wholesale trade	272	3.3%
11	Arts, entertainment, and recreation	214	2.6%
12	Agriculture, forestry, fishing, and hunting	213	2.6%
13	Construction	191	2.3%
14	Other services, except government	167	2.0%
15	Educational services	164	2.0%
16	Information	101	1.2%
17	Manufacturing	26	0.3%
18	Finance and insurance	19	0.2%
19	Management of companies and enterprises	17	0.2%
20	Mining	1	0.0%
	Total	8,180	100.0%

Source: BEA and DBEDT, READ.

Table 15 shows the changes in the GDP shares of the four tourism intensive industries in Hawaii County. From 2007 to 2017, the total share of the four tourism intensive industries decreased 0.3 of a percentage points from 30.4% to 30.1% in Hawaii County. Increased share in transportation and warehousing was offset by decreased share in accommodation and food services.

**TABLE 15. SHARES OF TOURISM INTENSIVE INDUSTRIES IN HAWAII COUNTY**

Industry Group	% of Total Nominal GDP		
	2007	2017	Changes
<b>Tourism Intensive Sectors in Hawaii County</b>			
Retail trade	8.7%	7.8%	-0.9%
Transportation and warehousing	3.7%	8.4%	4.7%
Arts, entertainment, and recreation	2.1%	2.6%	0.5%
Accommodation and food services	15.9%	11.2%	-4.6%
Tourism Intensive	30.4%	30.1%	-0.3%

From 2001 to 2017, total real GDP in Hawaii County increased \$1.9 billion or about 36.3%. As shown in Table 16, from 2001 to 2017, the government sector contributed the most at 30.3% of additional real GDP; followed by transportation and warehousing at 23.7%, utilities at 18.7%, health care and social assistance at 13.1%, and professional, scientific, and technical services at 11.7%. The top five industry groups together contributed about 97.6% of total additional real GDP from 2001 to 2017.

**TABLE 16. CONTRIBUTION OF ADDITIONAL REAL GDP IN HAWAII COUNTY**

	Industry Group	% of Additional Real GDP		
		2001-2007	2009-2017	2001-2017
1	Government	26.8%	23.2%	30.3%
2	Transportation and warehousing	2.7%	63.1%	23.7%
3	Utilities	4.4%	46.2%	18.7%
4	Health care and social assistance	6.5%	9.9%	13.1%
5	Professional, scientific, and technical services	6.4%	21.8%	11.7%
6	Retail trade	11.1%	23.2%	10.4%
7	Information	5.0%	15.4%	10.3%
8	Administrative and waste management services	0.8%	31.0%	8.7%
9	Agriculture, forestry, fishing, and hunting	0.6%	-0.5%	4.9%
10	Educational services	0.6%	-0.2%	2.9%
11	Arts, entertainment, and recreation	0.3%	-3.8%	1.6%
12	Wholesale trade	-4.8%	23.3%	1.3%
13	Real estate and rental and leasing	11.4%	19.7%	0.3%
14	Mining	-0.3%	-0.6%	-0.6%
15	Management of companies and enterprises	-0.8%	-2.2%	-0.9%
16	Manufacturing	-0.2%	-16.9%	-1.7%
17	Other services, except government	-1.2%	-8.2%	-4.5%
18	Finance and insurance	1.7%	-16.4%	-4.8%
19	Accommodation and food services	13.7%	-25.3%	-9.7%
20	Construction	15.5%	-102.7%	-15.8%
	Total	100.0%	100.0%	100.0%

Source: BEA and DBEDT, READ.

## Kauai County

As shown in Table 17, in 2017, Kauai generated approximately \$4.0 billion of nominal GDP. Real estate and rental and leasing generated the most GDP at about \$0.9 billion or 23.5% of total GDP; followed by accommodation and food services at about \$0.7 billion or 16.6%, government at about \$0.5 billion or 12.4%, transportation and warehousing at about \$0.4 billion or 9.7%, and retail trade at about 0.3 billion or 6.9%. The top five groups accounted for 69.1% of total nominal GDP in 2017.

**TABLE 17. NOMINAL GDP BY INDUSTRY IN KAUAI IN 2017**

Rank	Industry Group	2017 GDP (\$M)	Share of 2017 Total GDP
1	Real estate and rental and leasing	948	23.5%
2	Accommodation and food services	669	16.6%
3	Government	502	12.4%
4	Transportation and warehousing	390	9.7%
5	Retail trade	281	6.9%
6	Health care and social assistance	257	6.4%
7	Utilities	190	4.7%
8	Administrative and waste management services	189	4.7%
9	Professional, scientific, and technical services	132	3.3%
10	Arts, entertainment, and recreation	121	3.0%
11	Construction	87	2.2%
12	Wholesale trade	78	1.9%
13	Other services, except government	72	1.8%
14	Educational services	53	1.3%
15	Information	29	0.7%
16	Agriculture, forestry, fishing, and hunting	17	0.4%
17	Management of companies and enterprises	8	0.2%
18	Manufacturing	8	0.2%
19	Finance and insurance	7	0.2%
20	Mining	1	0.0%
	Total	4,038	100.0%

Source: BEA and DBEDT, READ.

Table 18 shows the changes in the GDP shares of the four tourism intensive industries in Kauai. From 2007 to 2017, the total share of the four tourism intensive industries decreased 3.8 percentage points from 39.9% to 36.2% in Kauai. Decreased share in accommodation and food services more than offset the increased share in transportation and warehousing.

**TABLE 18. SHARES OF TOURISM INTENSIVE INDUSTRIES IN KAUAI**

Industry Group	% of Total Nominal GDP		
	2007	2017	Changes
<b>Tourism Intensive Sectors in Kauai</b>			
Arts, entertainment, and recreation	8.8%	6.9%	-1.8%
Transportation and warehousing	4.2%	9.7%	5.5%
Arts, entertainment, and recreation	2.6%	3.0%	0.4%
Accommodation and food services	24.4%	16.6%	-7.8%
Tourism Intensive	39.9%	36.2%	-3.8%
Source: BEA and DBEDT, READ.			

From 2001 to 2017, total real GDP in Hawaii County increased \$0.7 billion or about 25.7%. As shown in Table 19, from 2001 to 2017, the transportation and warehousing sector contributed the most at 37.8% of additional real GDP; followed by government at 29.4%, utilities at 19.7%, healthcare and social assistance at 14.8%, and professional, scientific, and technical services at 13.4%.

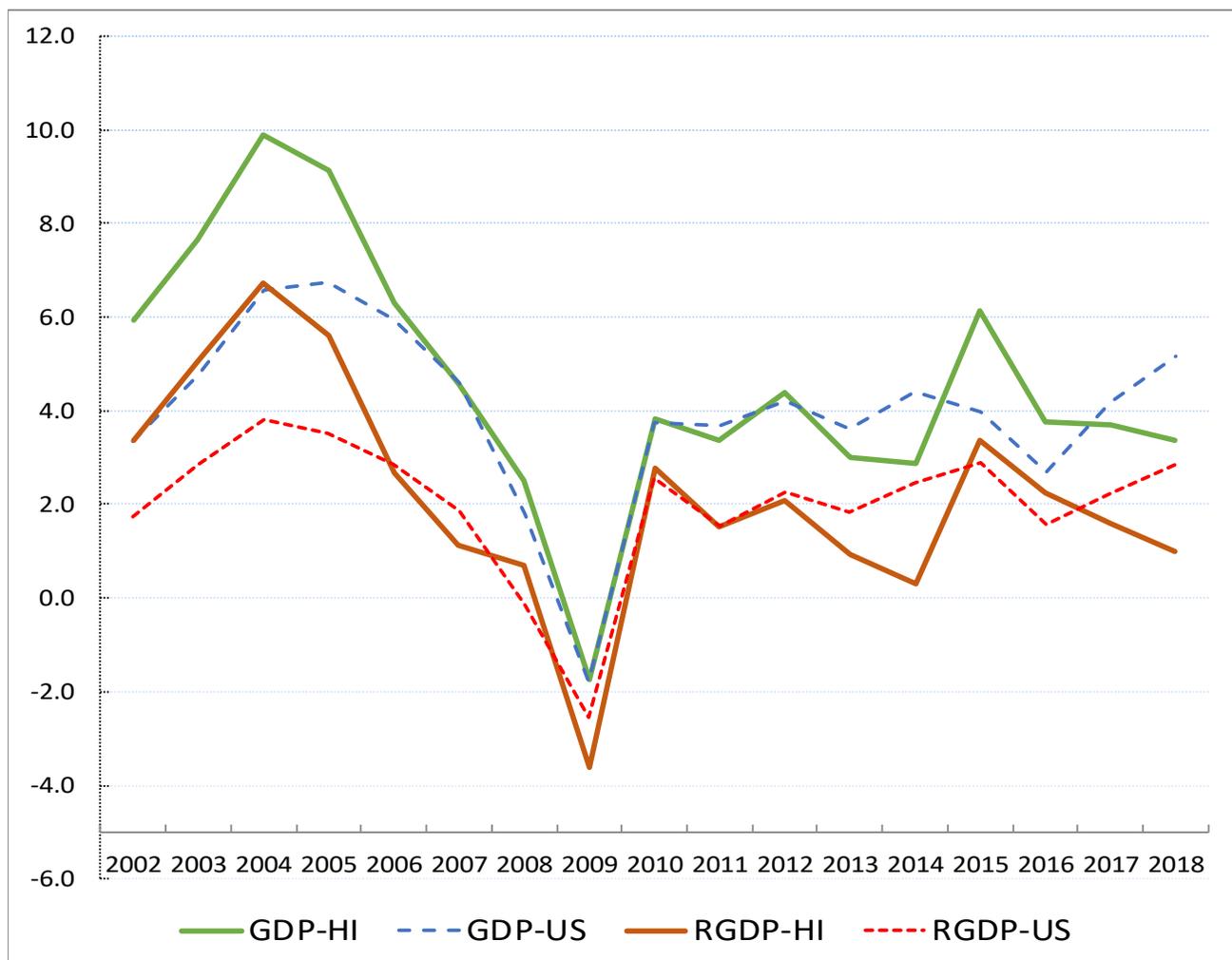
**TABLE 19. CONTRIBUTION OF ADDITIONAL REAL GDP IN KAUAI**

	Industry Group	% of Additional Real GDP		
		2001-2007	2009-2017	2001-2017
1	Transportation and warehousing	6.0%	78.2%	37.8%
2	Government	40.9%	18.2%	29.4%
3	Utilities	10.8%	38.8%	19.7%
4	Health care and social assistance	5.6%	13.8%	14.8%
5	Professional, scientific, and technical services	7.9%	17.1%	13.4%
6	Retail trade	17.7%	17.2%	9.3%
7	Administrative and waste management services	3.8%	27.9%	9.0%
8	Information	8.7%	1.6%	6.9%
9	Real estate and rental and leasing	-61.1%	25.8%	5.8%
10	Wholesale trade	11.6%	-10.4%	2.8%
11	Educational services	1.6%	-1.0%	2.5%
12	Arts, entertainment, and recreation	0.8%	-4.7%	2.5%
13	Manufacturing	0.0%	-7.4%	-0.5%
14	Management of companies and enterprises	-1.3%	-3.3%	-0.6%
15	Mining	-0.7%	-0.4%	-0.8%
16	Agriculture, forestry, fishing, and hunting	-2.5%	-5.9%	-2.2%
17	Other services, except government	6.0%	-10.3%	-5.9%
18	Construction	21.3%	-62.2%	-10.7%
19	Finance and insurance	-5.6%	-28.3%	-12.0%
20	Accommodation and food services	28.6%	-4.7%	-21.3%
	Total	100.0%	100.0%	100.0%
Source: BEA and DBEDT, READ.				

## IV. COMPARISON BETWEEN HAWAII AND THE NATION

Hawaii's economy performed differently from the national economy. As shown in Figure 6, from 2002 to 2010, Hawaii's annual growth rates of nominal GDP and real GDP were mostly above that of the nation. From 2011 to 2014; however, Hawaii's annual growth rates of nominal and real GDP were mostly below the national growth rates. In 2015 and 2016, the growth rates of nominal and real GDP in Hawaii were both above that of the nation. In 2017 and 2018, the growth rates of nominal and real GDP in Hawaii were both below that of the nation.

**FIGURE 6. COMPARISON OF ANNUAL GDP GROWTH RATE, 2002-2018**

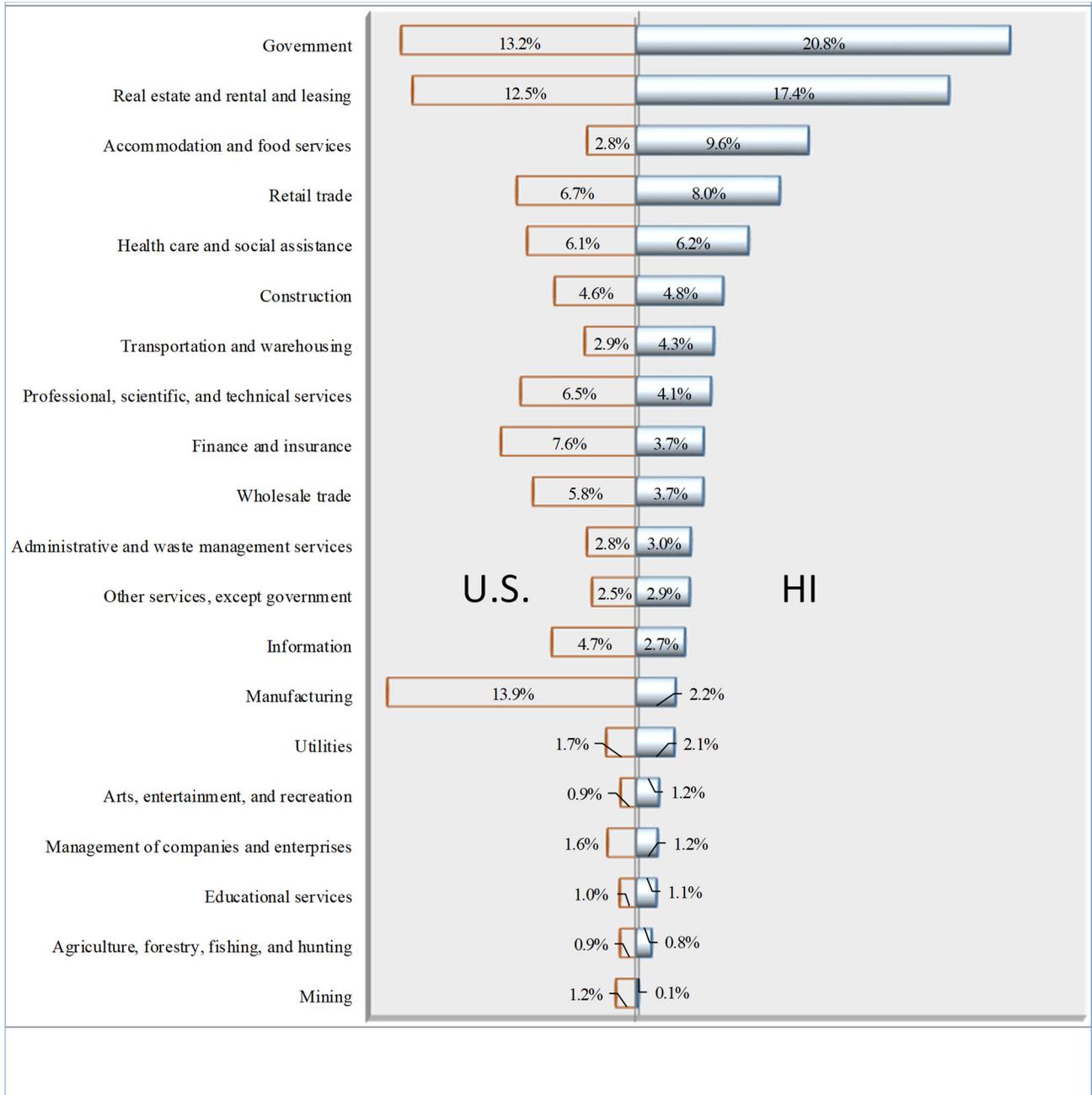


### Comparison of Industrial Structures

Due to the unique nature of Hawaii, its industrial structure is significantly different from that of the nation. As shown in Figure 7, in 2001, the top 5 sectors that generated the most nominal GDP in Hawaii were government (20.8%), real estate and rental and leasing (17.4%), accommodation and food services (9.6%), retail trade (8.0%) and health care and social assistance (6.2%). Together these sectors generated 62.0% of Hawaii's total nominal GDP in 2001. In comparison, the same sectors generated only 41.3% of the U.S. total nominal GDP.

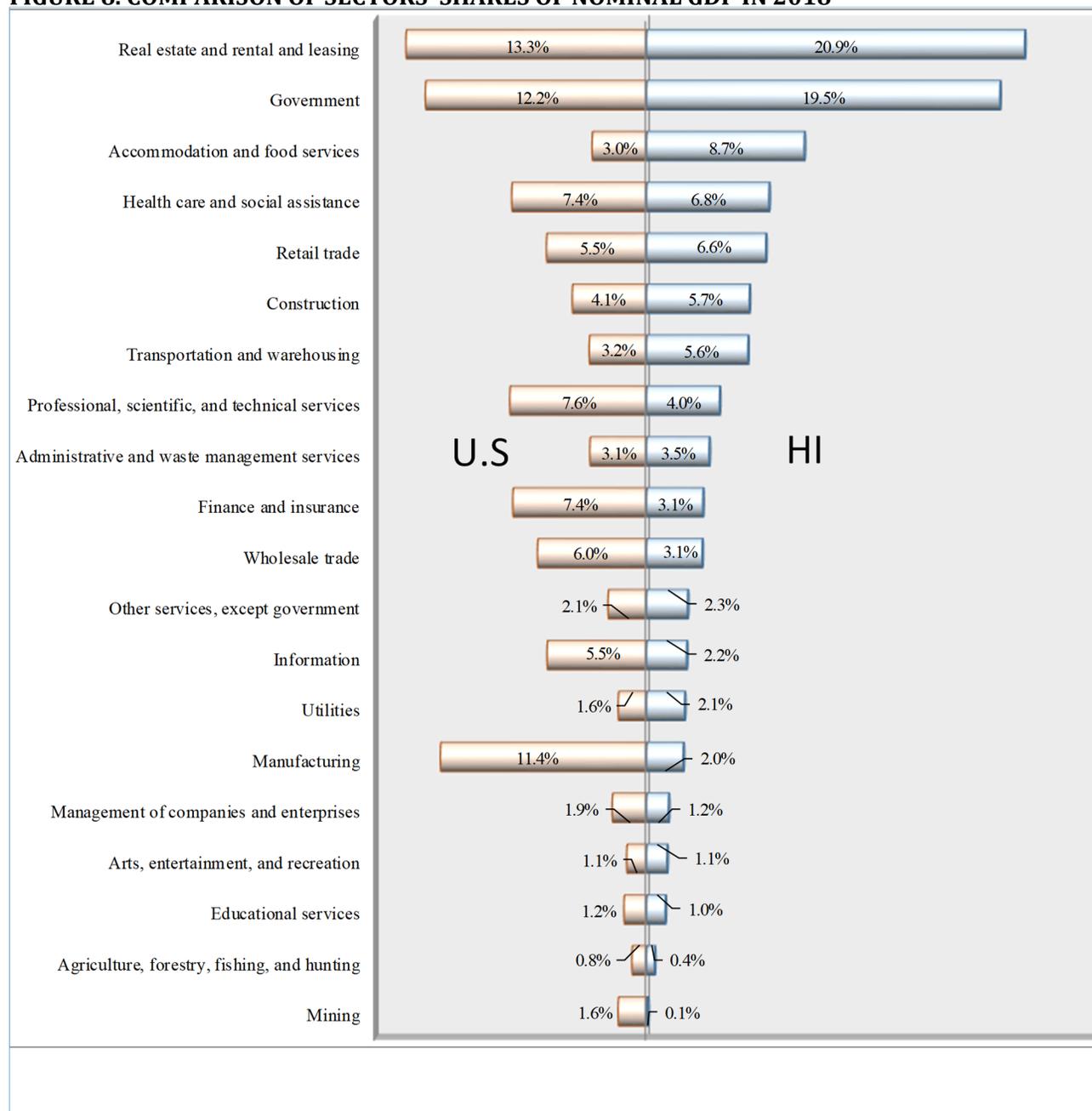
The largest gap (the share of Hawaii above the share of the U.S.) between Hawaii and the nation was in government (7.7 percentage points); followed by accommodation and food services (6.8 percentage points), real estate and rental and leasing (4.9 percentage points), transportation and warehousing (1.4 percentage point), and retail trade (1.3 percentage point). The largest negative gap (the share of Hawaii below the share of the U.S.) was in manufacturing (11.8 percentage points); followed by finance and insurance (3.9 percentage points), professional, scientific, and technical services (2.4 percentage points), wholesale trade (2.1 percentage points), and information (2.1 percentage points).

**FIGURE 7. COMPARISON OF SECTORS' SHARES OF NOMINAL GDP IN 2001**



As shown in Figure 8, in 2018, the top 5 sectors in Hawaii were real estate and rental and leasing (20.9%), government (19.5%), accommodation and food services (8.7%), health care and social assistance (6.8%), and retail trade (6.6%). Together these sectors generated 62.5% of Hawaii's total nominal GDP in 2018. In comparison, the same sectors generated only 41.5% of the U.S. total nominal GDP in 2018. The largest gap between Hawaii and the nation was in real estate and rental and leasing (7.6 percentage points); followed by government (7.3 percentage points), accommodation and food services (5.7 percentage points), transportation and warehousing (2.4 percentage points), and construction (1.6 percentage point). The largest negative gap was in manufacturing (9.4 percentage points); followed by finance and insurance (4.3 percentage points), professional, scientific, and technical services (3.5 percentage points), information (3.3 percentage points), and wholesale trade (2.9 percentage points).

**FIGURE 8. COMPARISON OF SECTORS' SHARES OF NOMINAL GDP IN 2018**



### Comparison of Sector Contribution to Real GDP Growth

The sector contributions to real GDP growth from 2001 to 2018 are provided in Table 20. In Hawaii, the real estate and rental and leasing sector contributed the most real GDP at about 30.5%; followed by government at about 12.8%, transportation and warehousing at about 9.3%, health care and social assistance at about 8.9%, and retail trade at about 7.4%. The top five groups in Hawaii accounted for 68.9% of total additional real GDP from 2001 to 2018. The same five groups in the U.S. accounted for 38.1% of total additional real GDP from 2001 to 2018. The top five groups in the U.S. were information, real estate and rental and leasing, professional, scientific, and technical services, health care and social assistance, and manufacturing. The top five groups in the U.S. accounted for 64.5% of total additional real GDP from 2001 to 2018, and the same five groups in Hawaii accounted for 50.2% of total additional real GDP from 2001 to 2018.

The gap between Hawaii and the U.S. was largest in real estate and rental and leasing, with the share of Hawaii above that of the nation by 15.4 percentage points; followed by government by 9.1 percentage points, and transportation and warehousing by 6.3 percentage points. On the other hand, the share of Hawaii in information was below that of the nation by 10.7 percentage point; followed by manufacturing by 9.8 percentage points, and professional, scientific, and technical services by 7.0 percentage points.

**TABLE 20. COMPARISON OF CONTRIBUTION TO ADDITIONAL REAL GDP, 2001-2018**

	Industry Group	% of Additional Real GDP 2001-2018		
		HI	U.S.	HI above U.S.
1	Real estate and rental and leasing	30.5%	15.1%	15.4%
2	Government	12.8%	3.7%	9.1%
3	Transportation and warehousing	9.3%	3.0%	6.3%
4	Health care and social assistance	8.9%	11.1%	-2.1%
5	Retail trade	7.4%	5.2%	2.2%
6	Administrative and waste management services	5.3%	4.5%	0.8%
7	Information	5.1%	15.8%	-10.7%
8	Professional, scientific, and technical services	4.7%	11.7%	-7.0%
9	Accommodation and food services	4.3%	1.8%	2.5%
10	Construction	3.0%	-2.6%	5.6%
11	Utilities	2.6%	1.3%	1.2%
12	Wholesale trade	2.0%	6.8%	-4.7%
13	Finance and insurance	1.4%	3.2%	-1.7%
14	Management of companies and enterprises	1.2%	2.0%	-0.8%
15	Manufacturing	1.0%	10.9%	-9.8%
16	Arts, entertainment, and recreation	0.8%	1.3%	-0.5%
17	Educational services	0.4%	1.2%	-0.9%
18	Agriculture, forestry, fishing, and hunting	-0.1%	1.2%	-1.3%
19	Mining	-0.2%	3.4%	-3.5%
20	Other services, except government	-0.5%	-0.5%	0.1%
	Total	100.0%	100.0%	0.0%

Source: BEA and DBEDT, READ.

The sector contribution to real GDP growth from 2001 to 2007 are provided in Table 21. In Hawaii, the real estate and rental and leasing sector contributed the most real GDP at about 24.0%; followed by government at about 14.6%, construction at 11.3%, transportation and warehousing at about 8.5%, and accommodation and food services at about 7.9%. The top five groups in Hawaii accounted for 66.4% of total additional real GDP from 2001 to 2007. The same five groups in the U.S. accounted for 23.9% of total additional real GDP from 2001 to 2007.

The gap between Hawaii and the U.S. was largest in construction with the share of Hawaii above that of the nation by 12.3 percentage points; followed by real estate and rental and leasing by 10.5 percentage points, government by 8.7 percentage points, accommodation and food services by 5.7 percentage points, and transportation and warehousing by 5.1 percentage points. On the other hand, the share of Hawaii in manufacturing was below that of the nation by 20.3 percentage point; followed by wholesale trade by 6.3 percentage points, information by 5.6 percentage points, health care and social assistance by 4.0 percentage points, and professional, scientific, and technical services by 2.9 percentage points.

**TABLE 21. COMPARISON OF CONTRIBUTION TO ADDITIONAL REAL GDP, 2001-2007**

	Industry Group	% of Additional Real GDP 2001-2007		
		HI	U.S.	HI above U.S.
1	Real estate and rental and leasing	24.0%	13.5%	10.5%
2	Government	14.6%	5.9%	8.7%
3	Construction	11.3%	-1.0%	12.3%
4	Transportation and warehousing	8.5%	3.4%	5.1%
5	Accommodation and food services	7.9%	2.2%	5.7%
6	Retail trade	6.4%	4.8%	1.7%
7	Information	5.2%	10.7%	-5.6%
8	Professional, scientific, and technical services	5.1%	7.9%	-2.9%
9	Health care and social assistance	4.5%	8.5%	-4.0%
10	Administrative and waste management services	3.6%	4.9%	-1.3%
11	Finance and insurance	3.5%	4.8%	-1.3%
12	Wholesale trade	2.4%	8.8%	-6.3%
13	Utilities	1.7%	1.0%	0.7%
14	Educational services	0.6%	1.0%	-0.4%
15	Arts, entertainment, and recreation	0.3%	1.0%	-0.6%
16	Other services, except government	0.2%	0.0%	0.2%
17	Manufacturing	0.2%	20.6%	-20.3%
18	Mining	0.1%	1.9%	-1.8%
19	Management of companies and enterprises	0.1%	-0.8%	0.9%
20	Agriculture, forestry, fishing, and hunting	-0.3%	0.9%	-1.3%
	Total	100.0%	100.0%	0.0%

Source: BEA and DBEDT, READ.

The sector contribution to real GDP growth from 2009 to 2018 are provided in Table 22. In Hawaii, the real estate and rental and leasing sector contributed the most real GDP at about 31.9%; followed by accommodation and food services at about 12.4%, retail trade at about 11.2%, transportation and warehousing at about 11.1%, and health care and social assistance at about 9.6%. The top five groups in Hawaii accounted for 76.3% of total additional real GDP from 2009 to 2018. The same five groups in the U.S. accounted for 34.8% of total additional real GDP from 2009 to 2018.

The gap between Hawaii and the U.S. was largest in real estate and rental and leasing with the share of Hawaii above that of the nation by 18.6 percentage points; followed by accommodation and food services by 9.6 percentage points, transportation and warehousing by 7.8 percentage points, retail trade by 4.1 percentage points, and government by 3.7 percentage points. On the other hand, the share of Hawaii in information was below that of the nation by 11.6 percentage point; followed by manufacturing by 9.7 percentage points, professional, scientific, and technical services by 9.2 percentage points, wholesale trade by 4.8 percentage points, and construction by 4.5 percentage points.

**TABLE 22. COMPARISON OF CONTRIBUTION TO ADDITIONAL REAL GDP, 2009-2018**

	Industry Group	% of Additional Real GDP 2009-2018		
		HI	U.S.	HI above U.S.
1	Real estate and rental and leasing	31.9%	13.4%	18.6%
2	Accommodation and food services	12.4%	2.8%	9.6%
3	Retail trade	11.2%	7.1%	4.1%
4	Transportation and warehousing	11.1%	3.4%	7.8%
5	Health care and social assistance	9.6%	8.1%	1.5%
6	Administrative and waste management services	6.7%	4.7%	2.0%
7	Information	4.6%	16.1%	-11.6%
8	Government	3.9%	0.2%	3.7%
9	Wholesale trade	3.5%	8.3%	-4.8%
10	Utilities	3.3%	1.4%	1.9%
11	Management of companies and enterprises	3.2%	4.4%	-1.1%
12	Professional, scientific, and technical services	2.8%	12.0%	-9.2%
13	Arts, entertainment, and recreation	0.8%	1.3%	-0.6%
14	Other services, except government	0.6%	0.3%	0.3%
15	Manufacturing	0.0%	9.7%	-9.7%
16	Mining	-0.3%	2.8%	-3.1%
17	Finance and insurance	-0.4%	1.2%	-1.6%
18	Educational services	-1.0%	0.3%	-1.3%
19	Agriculture, forestry, fishing, and hunting	-1.6%	0.4%	-2.0%
20	Construction	-2.4%	2.1%	-4.5%
	Total	100.0%	100.0%	0.0%

Source: BEA and DBEDT, READ.